

What is claimed is:

1. A light-quantity adjusting apparatus comprising:

a main body in which an opening is formed;

a light-blocking member moved with respect to the opening to change an area of a light-passing aperture;

an optical filter moved with respect to the opening to insert and remove with respect to a region opposed the light-passing aperture;

an actuator serving as a drive source; and

a drive mechanism for driving the light-blocking member and the optical filter by drive force from the actuator,

wherein the drive mechanism has an operation range in which a displacement amount of the optical filter with respect to the opening is made larger than a displacement amount of the light-blocking member with respect to the opening, while the actuator operates by a predetermined amount.

2. A light-quantity adjusting apparatus according to claim 1,

wherein the drive mechanism starts driving in a direction in which the optical filter is inserted into the region when the area of the light-passing aperture

decreased to a predetermined area by the movement of the light-blocking member.

3. A light-quantity adjusting apparatus according to claim 1,

wherein the drive mechanism has a first operation range in which the displacement amount of the optical filter is made larger than the displacement amount of the light-blocking member and a second operation range in which the displacement amount of the optical filter is made smaller than that of the first operation range.

4. A light-quantity adjusting apparatus according to claim 3,

wherein the drive mechanism drives the optical filter on an insert side than a predetermined position with respect to the opening in the first operation range and drives the optical filter on a remove side than the predetermined position.

5. A light-quantity adjusting apparatus according to claim 1,

wherein the drive mechanism comprising:

a first drive member, driven by the actuator, for driving the light-blocking member; and

a second drive member, connected to the first drive member at a connection portion and driven by the first drive member ,for driving the optical filter,

wherein, on the connection portion, an interlocking mechanism is arranged , the interlocking mechanism includes a cam region in which the displacement amount of the optical filter with respect to the opening is made larger than the displacement amount of the light-blocking member with respect to the opening ,while the actuator operates by a predetermined amount.

6. A light-quantity adjusting apparatus according to claim 1,

wherein in the optical filter, the width of a portion inserted into the light-passing region first is larger than the width of a portion inserted into the light-passing region second.

7. An optical apparatus comprising:

a light-quantity adjusting apparatus according to claim 1; and

an image-taking optical system including the light-quantity adjusting apparatus.

8. A camera comprising:

a light-quantity adjusting apparatus according to claim 1;

an image-taking optical system including the light-quantity adjusting apparatus; and

an image pickup element which photoelectrically converts an object image formed by the image-taking optical system into an electric signal.